

SMART BLIND STICK WITH VOICE ALERT

AIM:

Design and Development of Smart blind stick with voice alert.

PURPOSE:

Normal blind sticks don't have any additional features. It just sticks and guided by hand. Blind people can recognize objects and obstacles without any sensors but it is not always success. To provide auto recognition of obstacles and objects we have to add sensors. Here we have to make normal blind stick into smart blind stick with voice alert. Here project title is smart blind stick with voice alert.

DESCRIPTION:

This project includes ultrasonic sensor which is connected to digital pins of Arduino digital pin. Two IR sensors connected to Arduino digital pins. Voice IC APR33a3 connected to Arduino digital pin.

WORKING:

In this blind stick project, Ultrasonic sensor placed in front of stick to detect front coming obstacles. Two IR sensors placed at right and left of blind stick to detect left and right objects. If any sensor gets activated then respective voice will come from APR33a3. Sensors information will display on 16X2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Ultrasonic Sensor	:	HC-SR05
Object Sensor	:	IR Sensors
Voice output module	:	APR33a3
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

Arduino IDE

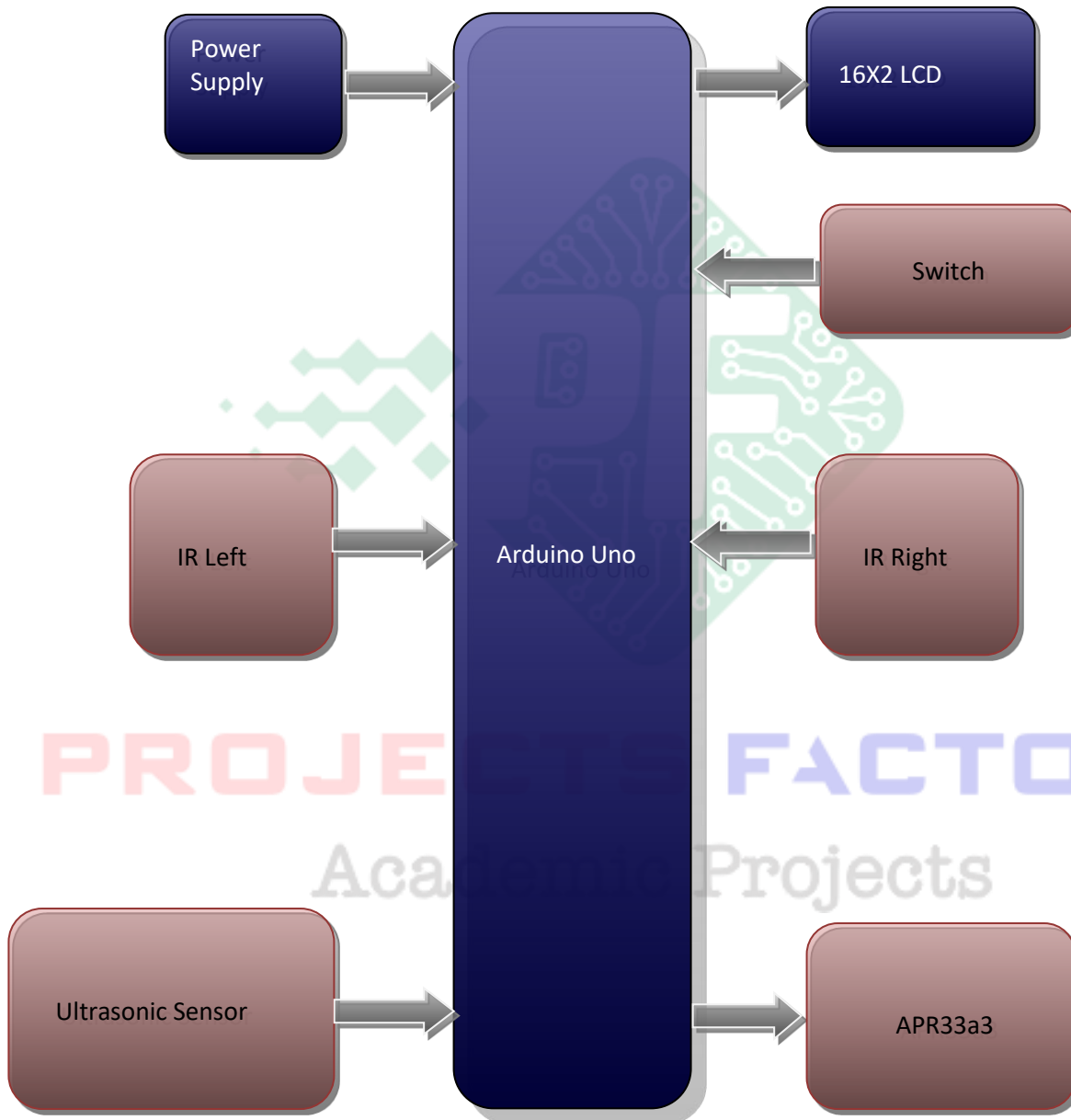
Proteus based circuit diagram

APPLICATIONS:

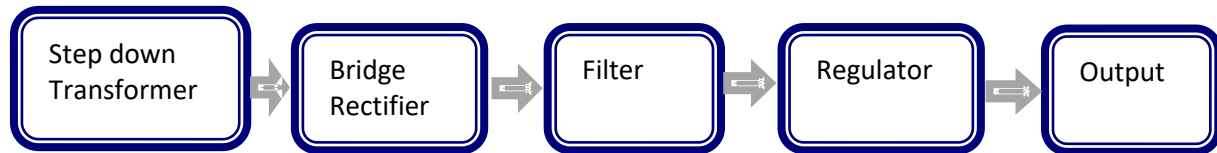
- Blind stick Applications

PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have interface ultrasonic sensor
- Two IR sensors and APR33a3 voice output module interface

PROJECTS FACTORY
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